

**METHOD OF FORMING A DIODE FOR INTEGRATION WITH A
SEMICONDUCTOR DEVICE
AND METHOD OF FORMING A TRANSISTOR DEVICE
HAVING AN INTEGRATED DIODE**

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Abstract of the Disclosure

The present invention relates to a method of forming a diode (2) for
integration with a semiconductor device comprising the steps of providing a layer
10 (4) of semiconductor material, forming a dielectric layer (6) over the layer of
semiconductor material, introducing a first conductivity type dopant into the
dielectric layer (6), forming a semi-conductive layer (8) over the dielectric layer
(6), introducing a second conductivity type dopant into a first region (12) of the
semi-conductive layer and re-distributing the first conductivity type dopant from
15 the dielectric layer (6) into the semi-conductive layer (8) so as to form a second
region (18) of the first conductivity type dopant in the semi-conductive layer (8),
the second region (18) being adjacent the first region (12) so as to provide a P/N
junction of the diode (2).

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